

Energy Efficiency and  
Renewable Energy After  
Deregulation  
*Environmental Impacts of Electric  
Utility Deregulation Conference*

1/22/97

Bill Grant, Midwest Office, IWLA

# Midwest Energy Efficiency Program, IWLA

- + IWLA: National conservation group with 50,000 members; mainstream, rural, sportsmen
- + MEEP: Began in 1992 with goal of utility regulatory reform to encourage energy efficiency, renewables
- + “Not large, but well armed!”

## MEEP Achievements

- + Increased utility commitments to DSM; NSP spending increase from \$34 mil. to \$96 mil. since '92
- + Renewables added to utility supply portfolios; 100 MW wind in NSP's '92 resource plan
- + Environmental externalities decision by MIN PUC

# Why Restructuring?

- + Large power customers demanding access to lower cost electricity
- + Investor owned utilities attempting to consolidate market power through mergers, cut costs by eliminating DSM
- + State and federal regulators divided; want benefits of competition but fear losing regulatory clout

## Who will Lose?

- + Small consumers fear higher rates to pay for power plants stranded by large consumers
- + Rural coops and munis fear loss of customer base
- + Enviros fear “least cost at all costs” market in which sustainable sources are 2nd best

## The Worst Case

- + Energy efficiency and renewables slashed in the face of competition
- + Open access to transmission and market power from mergers encourages sale of old, dirty power to more expensive regions
- + New but unneeded transmission lines built to serve distant customers

## The Worst Case (cont.)

- + Reliance on “market forces” rather than careful planning, results in new coal and gas plants, no renewables, failure to consider environmental costs

# Why Mergers?

- + Capture economies of scale - *Efficiency or cost shifting?*
- + Consolidate transmission/generation assets, administrative functions - *Efficiency or downsizing?*
- + Improve access to new markets - *Efficiency or market power?*



## Why Now?

- + Industry restructuring, threat of competition, is driving merger-mania
- + Open access to transmission - New markets to conquer and defend
- + Message: Get big or die!
- + NSP CEO: "15 utilities in 10 years; we want to be one of them"

# Merger Environmental Concerns

- + **Increased Sales =**
  - 1) increased emissions from older, less efficient power plants;
  - 2) new transmission lines through sensitive areas;
  - 3) more long distance transactions, with associated losses

# Merger Environmental Concerns (cont.)

- + Regulatory functions effectively federalized, preempting state environmental laws

# Potential Solutions

- + Just say no! Let wholesale competition work
- + “Old Source Review” for older plants, with initial system emissions cap
- + Regional oversight of transmission planning by fully independent body

## Potential Solutions (cont.)

- + Coordinated generation planning among states in the MAPP region
- + Firm commitments to energy efficiency and renewable energy development secured by:
  - + System benefits charge
  - + Renewable portfolio standard

## DSM Focus

- + Concern that utilities will cut DSM in response to restructuring is already a reality
- + No evidence that DSM raises rates, utility costs
- + No evidence that DSM is higher cost resource than long-run avoided cost

## DSM Focus (cont.)

- + No evidence that DSM potential has been captured
- + No evidence that retail competition will overcome DSM market barriers / failures
- + Short-term price reductions will kill customer efficiency incentives remaining after utility DSM is over

# Systems Benefits Charge

## Pros

- + Could raise big \$'s for DSM
- + "Market neutral"
- + "If its looks like a tax..."
- + Who administers?

## Cons

- + Split with other "social programs"
- + May suffer in property tax reform



# PBR with Revenue Cap

## Pros

- + Decouples sales from profits

## Cons

- + May not protect small customers from rate shock

# Green Pricing

## Pros

## Cons

- + Voluntary, market-based
- + Verification difficult, particularly for DSM
- + Effectiveness may be compromised by low rates to large consumers

# Portfolio Standard

## Pros

- + Market neutral, with trading system

## Cons

- + Verification difficult; may work better for renewables
- + Distribution utilities may lack proper incentives to do a good job

# Externality Values

## Pros

- + Sends correct price signal to market

## Cons

- + Currently adopted values not high enough to matter

- + New IRP process (?) may not accommodate

# Conservation Utility

## Pros

- + Puts DSM in hands of properly incented entity
- + Public/private entity could also support renewables RD&D
- + UK Energy Savings Trust example

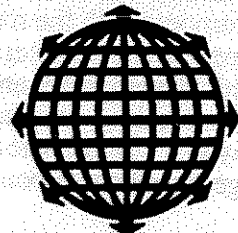
## Cons

- + Initial funding mechanism would be SBC, general revenue or pollution tax
- + ESCO's may feel threatened, but could receive support

The American Solar Energy Society (ASES) is a leading organization of scientists, engineers, and energy advocates who are working to advance the use of solar energy and other renewable resources. ASES is a non-profit organization that provides a national forum for the exchange of ideas and information among solar energy professionals and the general public. ASES is committed to the development and implementation of solar energy programs and policies that will ensure a sustainable and secure energy future for all.

# **Electric Industry Restructuring and Renewable Energy Resources: Developing Principles for Action**

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**American Solar Energy Society**  
**September, 1996**

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## **The American Solar Energy Society Position on Electric Utility Restructuring**

The American Solar Energy Society (ASES), the nation's leading assemblage of supporters of renewable energy science, applications, and policy, believes that restructuring of the electric utility industry in a manner that introduces free and fair competition, that provides meaningful customer choice in the selection of energy services at the retail level, and that produces a market that guarantees fully equitable access to the fruits of that competition, has the potential for lowering costs to all consumers, while increasing the opportunity to capitalize on the public's strongly expressed support for renewables.

To achieve these favorable outcomes and to avoid possible market and environmental abuses, ASES supports the establishment of clear and unequivocal ("nonbypassable") incentives and stipulations that provide reliable and sufficient funding to protect and further public interest policies. Such policies include those fostering research, development, and demonstration of renewable energy technologies as well as those that promote energy efficiency, demand-side management, and low income protection. ASES also supports public interest policies that promote continued and uninterrupted commercialization until renewable energy technologies become fully competitive.

Furthermore, ASES supports a market structure that is designed to redress the present inequities that strongly bias energy economics toward conventional energy resources and that is designed to explicitly value the economic and societal attributes of the clean energy resources. Present inequities include the unequal taxation burdens imposed upon capital-intensive energy sources.

### **Framing the ASES Recommended Positions**

A restructured electric utility industry must protect the public interest and preserve key public benefits associated with the development and use of renewable energy technologies. It is equally important to both maintain the existing level of renewable energy applications and to provide for continued research, development, demonstration, and commercialization of those emerging technologies that hold great promise, but that cannot yet compete in the imperfect energy market.

Under current conditions, the costs of emerging renewable energy technologies are unfairly compared to the costs of polluting conventional energy resources. Many emerging renewable energy technologies have not yet achieved manufacturing economies of scale and therefore cannot fairly compete with the mature, heavily tax-subsidized conventional technologies. Furthermore, the current energy market provides no regulatory or market basis to promote the attractive economic development and job creation benefits associated with the use of indigenous energy resources (such as solar energy). The rules of the new energy market, therefore, must be written in a way that compensates for these market imperfections, and that widens the economic analysis to the largest applicable boundary, such as state, region or nation.

### **ASES Recommended Policy Positions**

Given the market imperfections that hamper the progress of renewable energy technologies in the current market structure, utility restructuring can actually provide an opportunity for the adoption of renewable energy applications and resources. To capture this opportunity, there are a number of principles to which legislators and regulators must adhere. In restructuring proceedings, advocates should be proactive in addressing the following issues:

- The continued improvement of environmental quality, enhanced opportunities for equity and fairness among all electric bill-paying citizens, continued and sufficient low-income and weatherization assistance programs, and continued support for cost-effective energy efficiency

gains with clearly defined efficiency performance goals must be obligations on all providers of electrical services.

- Clean renewable energy acquisitions must be included in the restructured market rules as truly fundamental aspects of the electricity business. They are not merely "public interest programs", and are not to be tacked onto basic rules as afterthoughts, or even packaged with the other support structures suggested above.
- Customer choice must mean choice of products and services as well as of suppliers. Renewable distributed technologies must be required options for the customer.
- Non-discriminatory interconnection standards and rules must be developed so that renewable energy resource providers have access to the distribution system and have the ability to sell power into the power pool — directly to customers, suppliers, or aggregators.
- Aggregation of customers with particular resource preferences (e.g., renewable energy) or with convenient geographical proximity (communities or cities) must be permitted. However, all aggregators (including municipal utilities that compete in the market for energy) must be bound by the same nonbypassable public interest charges and renewables incentives.
- Information must be provided to consumers completely and fairly. If itemization of the above-margin costs of public interest programs (e.g., weatherization assistance) and renewable energy resources are to be explicitly listed as charges in the customer bills (e.g. as low-income subsidy is presently listed in some telephone bills), then all other costs, such as transition costs that include ratepayer buy-downs of stranded utility investments in nuclear energy resources, must also be listed.

It is critical that these principles be viewed and used as fundamental drivers of the ultimately adopted restructured market foundations and rules rather than as add-ons. Public (ASES) involvement must assure the inclusion of these (and more) principles in every stage of the proceedings and in all adopted implementation actions by jurisdictional authorities (legislatures, utility commissions, and the Federal Energy Regulatory Commission).

### How to Get There -- The Basic Policy Options

When the market becomes fair, competitive, and technology-neutral, and after renewables have accomplished market transformation to where they are fully commercialized options, the overriding environmental and economic benefits of renewables should be sufficient, without special policies. But with today's market inequities and distortions favoring the conventional energy resources, interim policies to promote renewables through market transformation are necessary.

There are a number of policies which can promote the development and acquisition of renewable energy resources within a restructured electric utility industry. The primary policy options under discussion are presented below, but it must be understood that different local and regional circumstances can favor different solutions, and that it can be perfectly feasible to promote several policies at once.

- Most basic: a minimum renewable purchase requirement (renewable portfolio standard--RPS), defining a minimum (floor) percentage of renewable resources to be represented in the portfolio of all suppliers of diverse portfolios of electricity. This percentage level is to be regularly reexamined and adjusted as societal priorities and evolving energy and renewables prices warrant. While most basic, however, this policy approach is also the most politically problematic. At the minimum, cost caps should be clearly defined to assure acceptable financial exposures under this policy. Or, the requirement can instead be a clearly defined RPS



goal, but to be implemented by a systems benefits charge (SBC) set at an appropriate level to accomplish the goal.

- A tradable credit system to enable all suppliers of electricity, even if under single-source direct-access contracts, or self-generators, to support the actual in-state implementation of a statewide renewable energy policy.
- A nonbypassable "Systems Benefits Charge" (SBC) with a clearly delineated and permanent portion to provide continued and reliable support for energy efficiency services, environmental protection, and low income subsidies, and with a separately delineated declining transitional portion to defray above-market costs of emerging renewable technologies at less mature or competitive stages of commercialization. Variations of this would be a "renewables fund" or a "sustainability fund", promoting the continued development of those resources, but with the proviso that all customers must share equitably in the benefits of those investments.
- A policy that enables distributed generation (e.g., PV) to be valued as load-reduction (conservation) technologies, and exempt from kWh surcharges.
- Exemption of renewable and distributed resources that provide system and environmental benefits from competitive transition surcharges resulting from guaranteed buy-downs of indebtedness in costly conventional energy resources (e.g., nuclear).
- Assurance of continuity in renewable energy policy as a precondition of approval for utility mergers.

### **Why Do This? The Rationale for Renewables**

Renewable energy resources provide many attributes in support of the public interest and in enhanced economic efficiency. Among these are:

- Increased local employment and income, enhanced local tax revenues, greater disposable income and enhanced gross domestic product, especially when local renewables replace imported energy.
- A more diversified resource base, and avoided fuel supply and price risks.
- Modular and small technologies which can provide infrastructure and economic flexibility, and adaptability to customer desires.
- The potential to eliminate pollution associated with electricity production and the promotion of responsible environmental stewardship, directed toward ultimate sustainability.

### **Why ASES Involvement in the Restructuring of the Electric Industry?**

ASES represents the public interest by promoting the societal and economic benefits of the continued maturing of renewable energy technologies. Members of ASES, acting individually or collectively, can offer constructive and unbiased technical and policy expertise in a nonpartisan manner in support of these technologies in the public interest. The ASES membership is controlled by no one and through its regional chapter construction, it has constituencies throughout the United States. ASES's technical and policy expertise is diverse, independent, and objective. Finally, ASES's public interest representation is strong, supplementing and strengthening the positions of the industrial associations.

# Speaker Biographies

## **Susan Mudd**

Susan is Wisconsin Program director of Citizens for a Better Environment a Midwest regional Environmental organization which works to improve public environmental health through research, advocacy, public education and citizen empowerment. Susan has a JD, a MD in Public Administration and Public Policy and a certificate in Energy Policy. At CBE, where she has been since 1985, she has worked on a broad range of issues including air quality (acid rain, hazardous air pollution, smog), water quality, pesticides, waste issues (solid, medical, recycling and reduction), pollution prevention, transportation and land use, and women's health and the environment. Susan is a member of the Wharton Risk Management Roundtable on ISO 14000.

## **Dr. Rodney Stevenson**

Rodney Stevenson is Professor of Business and Professor of Environmental Studies at the University of Wisconsin-Madison. In addition he is co-director of the Wisconsin Public Utility Institute and Chair of the Energy Analysis and Policy graduate program. Professor Stevenson received his Ph.D. in economics from Michigan State University and his B.A. in economics from Monmouth College (Monmouth, Illinois).

Professor Stevenson's research has focused on regulatory economics and policy, institutional economics, and performance measurement. Most of his research has been directed towards the energy and telecommunications utilities. He is currently involved in the analysis of electric utility restructuring, the costing and pricing of electric utility service, mergers in the energy utility sector, low-income energy service, universal service provisions for telecommunications, and telecommunications infrastructure development.

Professor Stevenson has served as a consultant, advisor, and expert witness for numerous state, federal and international governmental organizations, utilities, and consumer and environmental organizations.

## **William Grant**

William Grant was promoted to the position of Director of the Midwest office of the Izaak Walton League of America in the fall of 1995. From January 1992 to the present, he has also been Director of the Midwest Energy Efficiency Program for the Izaak Walton League. Mr. Grant directs the League's Midwest activities and also the advocacy of utility regulatory reform policies to promote energy efficiency and renewable energy in Iowa and Minnesota.

Under Mr. Grant's direction, the League has intervened in utility resource planning and energy efficiency cases in both states, as well as a major cogeneration case in Minnesota.

Before joining the League, Mr. Grant spent seven years with the Minnesota Department of Public Service as manager of the Utility Conservation and planning Unit.

Mr. Grant holds a B.A. in political science and history from Macalester College in St. Paul (1979), and is presently at work on his Masters in Public Administration from Hamline University, St. Paul.

## **Stephen Brick**

Stephen Brick is an independent energy and Environmental policy consultant. Currently he is serving as the technical and Policy coordinator of the Clean Air Task Force, a national initiative funded by the Pew Charitable Trusts and the Heinz Endowment.

Other current clients include: The Conservation Law Foundation, the Environmental law and Policy Center of the Midwest, Citizen Action Coalition of Indiana, The Izaak Walton League, The Southern Environmental Law Center and The Environmental Defense Fund from 1987 -1996.

Brick was employed at MBS Energy Associates. Prior experience include the Public service Commission of Wisconsin, the Wisconsin State Senate and the Wisconsin Citizen's Environmental council.

Brick has appeared as an expert witness before utility commissions and legislatures in numerous jurisdictions including Indiana, Pennsylvania, Connecticut, New York, Hawaii, Maine, Vermont, Massachusetts, Georgia, Wisconsin, California, Virginia, Michigan and Maryland.

Brick holds both B.A. and M.S. degrees from the University of Wisconsin.

## **Dr. Susan Hedman**

Susan Hedman began working on Utility regulatory policy issues in the late 1970 as a LaFollette Institute of Public Affairs at the University of Wisconsin. In 1980 she became a legislative aide for the Wisconsin State Senate Committee on Energy and Utilities where she helped develop legislation mandating incentives for alternative energy sources, integrating least-cost planning proceedings, a moratorium of nuclear power, Intervenor financing and a variety of energy conservation programs.

Dr. Hedman who holds a JD, and PH.D in Environmental Studies from the University of Wisconsin, has frequently represented environmental groups in Electric power and Clean Air Act litigation. She has worked with the law clinics at the University of Maryland (1988-91) and the University of Michigan (1991), where she was on the faculty. Dr. Hedman is currently with Environmental Law and Policy Center in Chicago.

## **Dr. Donald Aitken**

Donald Aitken is currently Senior Scientist for the Union of Concerned Scientists, Principal of his own consulting company, and Affiliate Faculty Member at the Frank Lloyd Wright School of Architecture. He has served the U.S. Department of Energy as the Executive Director of DOE's Western Regional Solar Energy Center. Dr. Aitken has also served as a Research Nuclear Physicist at Stanford University and as founder and Chairman of the Department of Environmental Studies at San Jose State University.

Dr. Aitken's work for UCS focuses on energy efficiency and the use of renewable energy resources in the electric utilities, and on the effects of those activities on regional environmental quality and on State economic development and job creation policy.

## **Mark Williamson**

Mark Williamson is Senior Vice President - Energy Services at Madison Gas and Electric Company where he is responsible for the general management of the Power Supply Operation and Engineering, Electric System Planning, Market Planning and Programs, Marketing Economic Development and Integrated Resource Planning Departments

He is also a Director on the Board Directors of Great Lakes Energy Corporation (GLENCO), MGE's non-regulated energy products and services company and a Vice President and Director of Central Wisconsin Development Corporation, MGE's economic development subsidiary

Williamson has a bachelor's degree in mathematics from the UW - Madison and doctor of Law from the UW Law School. Prior to joining MGE in 1986, he Practiced extensively in the commercial litigation arena.

## **Frank Jablonski**

Frank Jablonski, Attorney at Law, JD, University of Wisconsin, 1983.

Attorney, consultant, legislative advocate and author providing legal, legislative and advisory services to businesses, non-profit organizations, public policy makers and political campaigns. 15 years legal, consulting and managerial experience in energy, environmental regulatory, legal and business issues.

Working professionally on environmental, energy, toxic substance, natural resource and regulatory issues since 1982.

General Counsel to Wisconsin's Environmental Decade, the state's largest environmental organization, 1983- 1987. Regional Manager for Puget Energy Services, Inc., an energy services subsidiary of Puget Sound power and Light Company, an investor-owned utility. 1988- 1991 and in Private practice Law 1991-present.

Lead counsel in numerous regulatory and court actions involving environmental impacts, regulated industries, renewable energy and energy efficiency. Frequent speaker on energy and related economic development and regulatory issues.

## **Joseph E. Schefchek**

Joseph Schefchek is the Assistant Vice President of Environmental Affairs and Research at Wisconsin Power and Light Company (WP&L), based in Madison, Wisconsin. Since joining WP&L in 1984, Mr. Schefchek has developed and implemented a wide range of proactive environmental and research initiatives. Mr. Schefchek was the lead negotiator for WP&L in the first sale of SO<sub>2</sub> emission allowances under the 1990 Clean Air Act. He has also led the utility industry's policy development for both Manufactured Gas Plant (MGP) site remediation and oil spill contingency planning.

Before joining WP&L, Mr. Schefchek taught environmental engineering at the University of Wisconsin and worked in consulting and federal government positions. He has published and presented technical papers on numerous environmental topics. He is a graduate of the University of Wisconsin-Madison where he received an MS in Civil and Environmental Engineering.

## Brian Burke

Brian B. Burke, age 38 has served as State Senator to the 3rd Senate District since November 1988.

Senator Burke is currently co-chair of the Joint Committee on Finance. Previously he served on the Committee on Environment and Energy the Judiciary Committee, the Legislative Council and the Joint Committee for Review of Administrative rules Senator Burke also chaired the Committee on Urban Affairs, Financial Institutions and Environmental Resources, and co-chaired the Joint Committee on Audit.

He is also affiliated with the following organizations: The Center for Clean Air Policy; The Greater Milwaukee Toxics Minimization Task Force; the Kinnickinnic Priority Watershed Advisory Committee; the Milwaukee Harbor Remedial Action Plan Citizens' Advisory Group; the Menomonee Valley Greenway Committee; and the Executive Board of the Wisconsin Public Utility Institute.

Senator Burke, Phi Beta Kappa, graduated *magna cum laude* from Marquette University in 1978 while majoring in history and political science, and later received his law degree from Georgetown University in Washington, DC. At Georgetown, Senator Burke served on the editorial board of Law and Policy in International Business- the Georgetown international Law Journal.

A perfect environmental voting record has consistently earned Senator Burke distinction as a "Clean Sixteen" legislator. He has also received the first ever Cesar Chavez Humanitarian Award, and the Nature Conservancy's Bridge Builder award. The Milwaukee Journal also recognized Senator Burke as one of the outstanding state leaders of the decade.

## Gary Mathis

Mr. Mathis is the Assistant Administrator - Policy in the Electric Division of the Public Service Commission. In that position he has managerial responsibilities over all aspects of electric utility regulation. He has been with the Commission since 1979, and served as Director of electric Rates prior to his current responsibilities. Mr. Mathis received a Bachelor degree in Environmental Studies in 1975, and a Masters degree in Planning in 1978 from the University of Wisconsin. He has been on the Staff Electricity Subcommittee of the National Association of Regulatory commissioners (NARUC) for the last ten years.

## Cheryl L. Parrino

Ms. Parrino is the Chairman of the Public Service Commission of Wisconsin. Prior to becoming a commissioner she held various positions in the agency. She received a degree from the University of Wisconsin with a major in accounting. Ms. Parrino completed her one year term as the President of the National Association of Regulatory Utility Commissioners (NARUC) in November 1996. She is a member of the NARUC's Executive Committee and Communication committee. She is a member of the Bellcore Advisory Board and the Federal State Joint Board on Separations. She is also the past Chairman of the Board of Directors of the Wisconsin Public Utility Institute, the past Chairman of the Ameritech Regional Regulatory Commissioners, and the last President of the Great Lakes Conference of Public Utilities Commissioners.

# Summary of Environmental Impacts from Electric Utilities In Wisconsin and Changes in Environmental Regulations Under Electric Utility Deregulation Proposals

## *By Wisconsin's Environmental Decade*

Since the fall of 1994, Wisconsin's Public Service Commission has been investigating and soliciting public input on proposals to restructure and deregulate the electric utility industry in Wisconsin. Early in 1995, the Commission appointed a 22 member advisory committee of stakeholders including utilities, industrial and residential customer representatives, labor, environmental and consumer public interest groups and state agencies who spent eight months studying proposing alternative industry structures. The advisory committee's final recommendations to the Commission contain two primary proposals (3 additional proposals are variations on one of the primary ones) to restructure the industry.

One proposes relatively sweeping deregulation relatively soon which would break up monopoly service territories, deregulate price, eliminate much of the planning done today and significantly reduce the Public Service Commission's authority to regulate environmental impacts through planning. This proposal also significantly reduces required energy conservation funding. This proposal is supported by the three largest investor-owned utilities--Wisconsin Electric Power Co. (WEPCO), Wisconsin Power & Light (WP&L) and Northern States Power (NSP)--some independent power producers (IPPs) from outside Wisconsin and the utility's largest industrial customers.

A second option proposes a much slower and measured approach to deregulation including numerous prerequisites to retail competition including market power safeguards, transmission divestiture or other separation, affiliated interest safeguards and significant retention of PSC environmental authority. This group is proposing that current levels of investment in energy conservation be maintained and that policies be implemented to ensure development of renewable resources. This proposal is supported by the municipal utilities, rural electric cooperative utilities, utility labor unions, residential consumer advocates, small business advocates, the smallest investor-owned utility, low income advocates and environmental groups.

The following set of tables and graphs provides an outline of some of the environmental impacts of the electric utility industry and the proposed changes to the state's regulatory authority over environmental impacts of this industry.



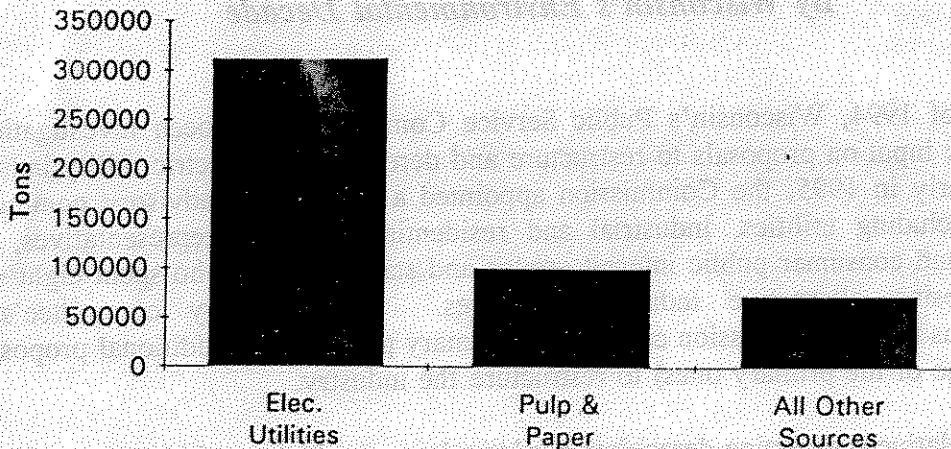
## ELECTRIC UTILITY DEREGULATION AND THE ENVIRONMENT:

*"Pollution could worsen as a result of deregulation. With interstate power lines opened up, Midwest coal-fired power plants could run flat out to sell cheap power to the Northeast."* Wall Street Journal, November 16, 1995, page 1.

### TOTAL AIR POLLUTION

The electric utility industry accounts for only 3% of the state's economy, but produces 64% of the total regulated air pollutants, such as sulfur dioxide and oxides of nitrogen. Electric utility plants produce more than three times the amount of the next highest polluting industry, pulp and paper.

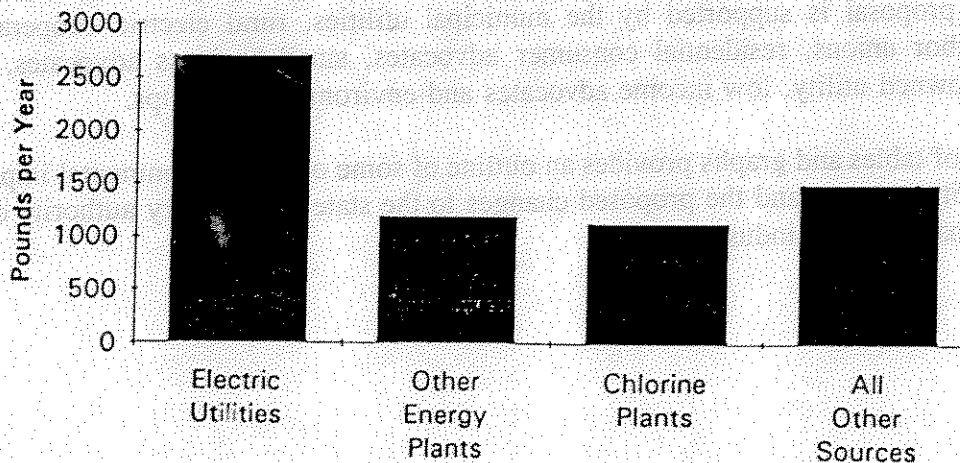
Total Wisconsin Regulated Air Pollutants - 1993



### MERCURY EMISSIONS

Mercury is a heavy toxic metal emitted from the combustion of coal. Electric utilities currently operate under an EXEMPTION from state and federal regulation controlling mercury emission. Furthermore, coal plants are by far the largest source of mercury emissions in the state. Already, more than 275 of the monitored lakes and rivers in Wisconsin contain mercury-poisoned fish unsuitable for human consumption. *Most lakes and rivers have not yet even been tested.*

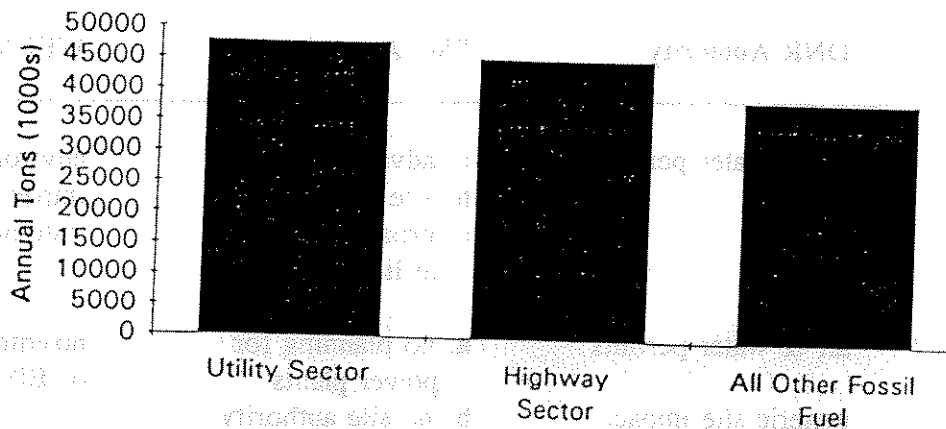
Wisconsin Mercury Emissions



## GREENHOUSE GAS EMISSIONS

Electric utility plants produce more greenhouse gas emissions than all the cars, trucks, and buses on the road. The utility industry is the fastest growing source of carbon dioxide emissions in the state.

### Wisconsin Greenhouse Gas Emissions - CO2 Equiv.



## ELECTRIC UTILITY DEREGULATION AND POLLUTION

The electric utility industry already has more impact on the Wisconsin's environment than any other industry. If the utility's radical deregulation plans are realized, the impacts will become even more significant to the health of Wisconsin's citizens and environment.

	Nitrogen Oxides	Sulfur Dioxide	Mercury	Carbon Dioxide
<b>All Sources - Wisconsin</b>				
1994(tons)	157762	264696	2.636	132698000
<b>Electric Utilities-</b>				
1994(tons)	104792	167662	1.579	47903000
% of state total	66.4%	63.3%	59.9%	36.1%
<b>Projected increase due to lost energy efficiency(tons)</b>	+18706	+41438		+3624000
% of state total	+11.9%	+15.7%		+2.7%

Sources: Wisconsin DNR, Wisconsin PSC, US EPA, EPRI

## Proposed Changes to Agency Authority Over Environmental Impacts

Option	DNR Authority	PSC Authority	WEPA*
Current	air & water permits	a. advance planning b. site impacts c. broad authority to limit pollution	environmental impact statements
WEPCO/WP&L/ NSP/large industry	air & water permits generic site impact standards	a. no planning for power plants b. no site authority c. no authority to limit pollution	no enforcement of EIS
utilities/ labor/small consumers/small business/enviro groups	air & water permits	a. planning for power and transmission lines b. site impacts c. limit but retain some authority to limit pollution	continue to enforce WEPA

\*--WEPA is Wisconsin's Environmental Policy Act and requires an environmental impact statement (EIS) to be prepared for major projects significantly affecting the human environment.

## Proposed Changes in Ability to Address Pollution

Option	Acid Rain	Global Warming	Mercury contaminated Fish	Smog	Air Toxins
Current	DNR & PSC	PSC	PSC	DNR & PSC	PSC
WEPCO/WP&L/ etc.	DNR	none	none	DNR	none
small utilities /consumers/etc.	DNR & PSC	PSC or DNR	PSC or DNR	DNR & PSC	DNR or PSC

# Utility Restructuring: *Boon or Bane for Renewables?*

Electric utility restructuring in the U.S. offers both challenges and opportunities for the renewables industry.

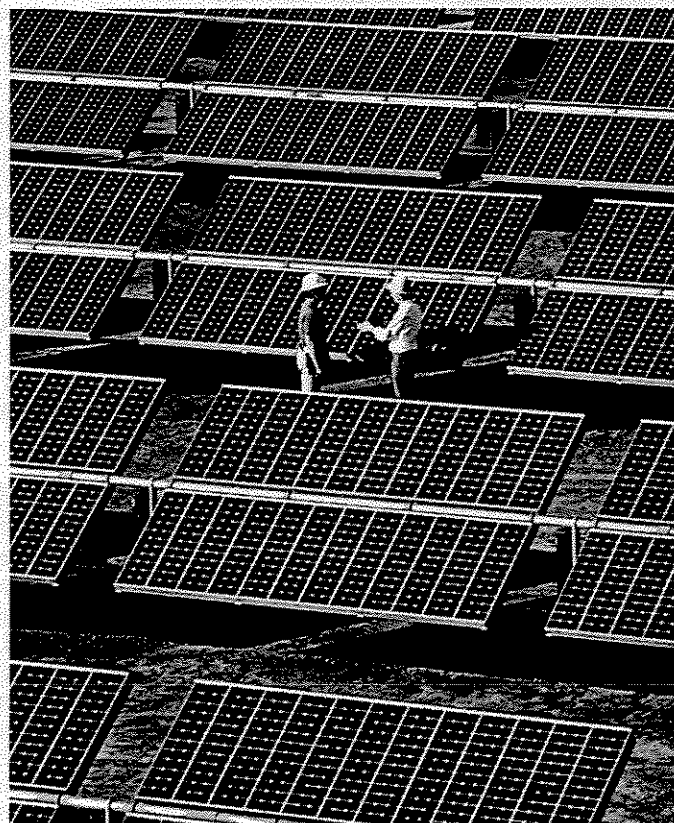
JOEL R. HOCHANADEL  
AND DONALD W. AITKEN, PH.D.

**T**he electric utility industry in the U.S. is in the midst of a dramatic restructuring. To understand the threats and opportunities facing renewables as a result of this restructuring, it is helpful to take at least a simplified look at the history of the emergence of competition in the electric utility industry.

## **Changing Times**

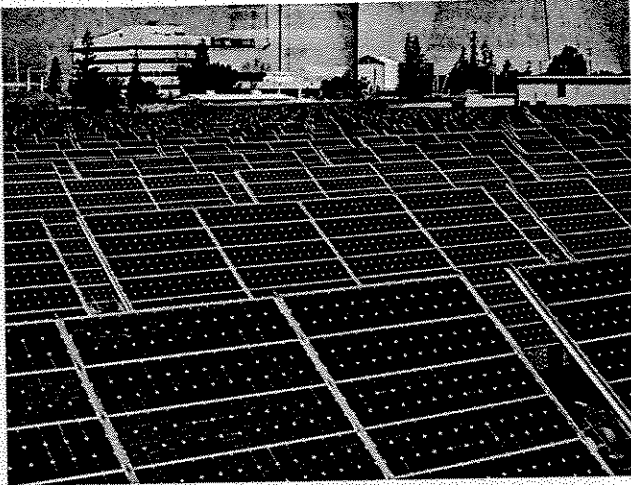
For over 60 years, the electric utility industry was basically unchanged. Then several important developments began to change things. The most notable of these was the oil crisis in the 1970s and the increased use of natural gas, which was driven by dramatically lower costs after gas industry deregulation. In 1978, Congress passed the Public Utilities Regulatory Policies Act (PURPA), which mandated that public utilities must purchase power generated by qualifying facilities (cogeneration and renewables) at the utility's avoided cost (cost it would otherwise incur to generate power by conventional means).

Then, in 1992, the Energy Policy Act (EPACT) began opening the utility industry to wholesale competition. EPACT required utilities to open their transmission systems to nonutility generators. In effect, power generators in one part of the country with excess supply can sell to another part of the country that needs supply by "wheeling" across the interstate transmission system. The result is that nonutility generators now account for 60 percent of new generating capacity being built in the United States (and all of the new capacity in California).



*The Sacramento Municipal Utility District's Hedge substation 258 kW photovoltaic power plant. This installation was finished in 1993 and is the first of four substation PV power plants operating at Hedge, now totalling 600 kW.*

At present, wheeling is limited to the wholesale level. The federal government is actually still barred from ordering wheeling between supplier and customer in direct retail transactions ("retail wheeling"). However, large customers in energy-intensive industries are leading the push to allow for it because they are faced with increasing global competition, and because energy costs, while relatively small in comparison with all other costs, still represent substantial annual investments.



The Sacramento Municipal Utility District's PV 1 & 2, established in 1985, make up the world's largest operating PV power plant.

For many reasons, including capital investment decisions, state regulations and tax treatments, the cost of electricity varies from one area of the country to another. For example, in New York State and California, industrial users pay 7 cents per kWh while the national average is closer to 4.7 cents. Therefore, industry in these states is at a disadvantage compared to competitors located in states with lower electric rates. As businesses relocate to areas with favorable rates, taking with them jobs and tax revenues, states have an incentive to see rates lowered and to introduce retail competition in the sale of electricity as an inducement to industry to remain. In all but three states, various forms of restructuring the electricity industry, including retail wheeling, are under consideration by legislatures, commissions or both.

From the industry perspective, the vertically integrated utility will be "unbundled" in the future into separately operated and independently owned generation, transmission and distribution entities. (In California, for example, this process will be complete by January 1, 1998.) The transmission and distribution functions will continue to be regulated in the public interest, so the electricity industry is really being "re-regulated" rather than deregulated.

In spite of the changes that have occurred in the industry over the last two decades, the electric utility system has always favored conventional fuels and power generation over renewable resource options. First, the youth of the nonhydro renewables industry and the fact that most of the newer renewable technologies are not mature enough to have realized significant economies of scale mean that the cost per kWh of renewables is higher than that of conventional alternatives.

Furthermore, the higher upfront capital cost of renewables (as opposed to their lower or non-existent operating costs and freedom from fuel cost and supply risks) is at odds with the way most utilities tend to or are allowed to analyze their investment choices. And conventional fossil fuels receive subsidies through favorable tax treatment. Finally, the environmental benefits of renewables are not incorporated into its price, or, conversely, the societal cost of pollution is not

incorporated into the price of electricity generated by fossil fuels. The result is that, according to the reference case figures from the 1996 DOE/EIA Annual Energy Outlook, in 1994 renewable energy generation (including municipal solid waste but excluding hydropower) accounted for only 2.25 percent of all kilowatt-hours produced. Including the 6.8 percent from hydropower, that leaves about 91 percent of the nation's electric power generation from the conventional fossil and nuclear energy resources.

### Uncertain Future

From the perspective of renewables advocates and environmentalists, the future of demand side management and energy efficiency programs as well as low income assistance, continued research in the public interest and the commercialization of renewables are all at issue. From the standpoint of ASES members, the most important question will be: what happens to renewables in a competitive market in which short-term price will be the main determinant of resource allocation? If energy is viewed by the market only as a commodity, and utilities must compete to be the lowest cost provider, how can we assure that renewable energy technologies will continue to develop to the point where they can compete?

Experience in Germany, Sweden and Japan has shown that there is a substantial "green" market demanding renewable energy resources and willing to pay a premium for them under direct contracts with suppliers. Based on this, many U.S. renewable energy companies see electric utility restructuring and direct access as an opportunity to jump-start the presently stagnant renewables industry. If the overseas experience is an indicator for the U.S., this

could be a major near-term market opportunity, and hence a potential "boon" to renewables from restructuring. But it must be understood that this is not a substitute for stable, consistent public policy in support of clean, renewable resources. Indeed, it could again be the kind of bubble that took renewables from boom to bust in the 1970s. Only long-term, stable underlying policy can foster investor confidence and build an industry.

ASES is therefore taking a proactive role to ensure that renewable energy resources remain a growing part of our nation's energy mix. ASES has developed a policy position paper (see "ASES Position on Utility Restructuring," page 25) that responds to the changes underway in the electric utility industry. As states, regions and the nation as a whole begin the long process of deregulation and restructuring, utilities are already changing the way they conduct business. ASES believes that these changes could be made into opportunities for the continued development of clean renewable energy options (see Readers Forum, page 46, for one perspective), but only with due diligence of economic and legislative policymakers outside, as well as inside, the electricity business.

ASES continues to assist advocates who are working at the state level to assure that these opportunities are captured. Part of the battle is to educate the public as well as legislators and regulators on the societal and economic benefits of renewables.

While these target audiences are beginning to recognize the environmental benefits of renewables, many of the economic benefits are less well understood. The economic benefits of renewables are numerous:

- Renewables can serve as a hedge against fuel price and supply risk.
- Renewables are modular and therefore renewable generation is often quicker and less expensive to build and more easily adapted to short-term changes in demand.
- Renewables are consistent with the concept of the distributed utility (i.e., there is less risk and lower transmission losses with renewable technologies installed at or near the point of end use).
- And, a feature gaining widespread recognition is that renewables create more jobs, generate more new industries and contribute more to overall and regional disposable income and gross domestic product than their conventional counterparts.

ASES encourages members and other supporters of renewable energy to take action in their states to promote the ASES-recommended policies and options. Those

## ASES Takes Position on Utility Restructuring

ASES has just completed a policy position paper, entitled "Electric Industry Restructuring and Renewable Energy Resources: Developing Principles for Action" through the efforts of the ASES Policy Committee. The committee developed this policy as a tool for renewable energy advocates to use as they attempt to make the case for renewables before state legislatures and regulatory bodies.

In the paper, ASES supports establishment of "nonbypassable" conditions and incentives to further public interest policies such as those that promote the research, development, demonstration and commercialization of renewable energy technologies and that promote energy efficiency, demand side management and low income protection. ASES also advocates policies that assure that any post-restructuring market structure redresses present biases that favor conventional energy resources and discourage the development of renewable resources.

In order for the opportunities associated with restructuring to be exploited and the benefits of renewables to be realized, restructuring must heed some fundamental principles. The position paper states that, in restructuring proceedings, advocates should be proactive in addressing the following issues:

- Continued improvement of environmental quality, opportunities for equity and fairness among all electric rate payers, continued protection of low-income programs and continued support for cost-effective energy efficiency gains must be obligations of all providers of electrical services.
- Clean renewable energy acquisitions must be included in the restructured market rules as truly fundamental aspects of the electricity business rather than being tacked onto basic rules as afterthoughts.
- Customer choice must mean choice of products and services as well as suppliers.
- Non-discriminatory interconnection standards and rules must be developed so that renewable energy resource providers have access to the distribution system and have the ability to sell power into the power pool.
- Aggregation of customers must be permit-



A wind farm in Minnesota.

ted. However, all aggregators must be bound by the same nonbypassable public interest charges and renewables incentives.

- Information must be provided to consumers completely and fairly—if itemization of the above-margin costs of renewable energy resources are to be explicitly listed on customers' bills, then all other costs, such as ratepayer buy-downs of stranded utility investments in nuclear energy resources, must also be listed.

These principles can be incorporated through adoption of a number of different options. The options listed in the ASES policy paper include:

- Most basic: a minimum renewables purchase requirement (renewable portfolio standard [RPS]) that defines a minimum percentage of renewable resources to be represented in the portfolio of all suppliers of diverse portfolios of electricity or supported equally by suppliers without diverse portfolios. Or, the requirement can be a clearly defined and legislatively mandated portfolio standard goal, but to be implemented by a systems benefits charge (SBC) set at an appropriate level to accomplish the goal.
- A tradable credit system to enable all suppliers of electricity, even if under single-source retail ("direct-access") contracts, or self-generators, to support the actual in-state implementation of a statewide re-

newable energy policy or standard.

- A separate, nonbypassable "Systems Benefits Charge" (SBC) with a clearly delineated and permanent portion to provide continued and reliable support for energy efficiency services, environmental protection and low income subsidies and with a provision to defray the above-market costs of emerging renewable technologies at less mature stages of commercialization.
- A policy that enables distributed generation (e.g., PV) to be valued as load-reduction (conservation) technologies and exempt from kWh surcharges.
- Exemption of renewable and distributed resources that provide system and environmental benefits from competitive transition surcharges resulting from guaranteed stranded cost recovery for conventional energy resources (e.g., nuclear).
- Assurance of continuity in renewable energy policy as a precondition of approval for utility mergers.

Different local and regional circumstances can favor different solutions and it can be perfectly feasible to promote several of these policies at once. ☉

interested can write letters to their legislators and utility commissioners or even testify at commission proceedings or legislative hearings to ensure that short-sighted interests are balanced with long term sense. Advocates can assume that the vested fossil fuel interests will be stating their cases loudly, but cannot assume that someone will be making the case for renewable energy and energy efficiency. While some states, such as California and

Massachusetts, have already had varying levels of success at securing the future of renewables, those successes came after hard fought battles. For more information on what you can do, contact ASES headquarters at (303) 443-3130. ☉

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The complete text of "Electric Industry Restructuring and Renewable Energy Resources: Developing Principles for Action" is available from ASES headquarters or at the ASES Website: <http://www.ases.org/solar>.

# COMPETITION COMES TO ELECTRICITY

## INDUSTRY GAINS, PEOPLE AND THE ENVIRONMENT LOSE

BY ROGER COLTON

"People will die." That's why Bobbi Bennett, an energy specialist at the National Training and Information Center (NTIC) in Chicago, opposes competition in the electric utility industry. "Many people simply can't afford to pay their bills," Bennett says. "Some of them will die if their protection is left up to a competitive utility."

It was nighttime and Philadelphia Electric had turned off the electricity to Gloria Blackwell's home. The kids were playing by candlelight in a back bedroom. Their eyes flickered shut but the candle didn't flicker out. The result? A seven year old child dead and a five year old scarred for life with third degree burns over 35% of his body.

"We don't like to shut people off," the utility's spokesperson was quoted as saying, "but if they're not going to pay, we can't keep giving them free electricity."

This scenario is likely to play out in increasing numbers as utilities "get tough" in their collection efforts. These efforts are necessary to be more com-

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petitive, the utilities say. In one case, Southern California Edison chose to treble its service disconnections, to one-half million customers in 1995 alone.

The lights blinked once... twice, and then went out. Suddenly, consumers were looking at computers that were not computing, lights that were not lighting, and refrigerators that were not refrigerating. At one point in July 1996, two million consumers in eleven western states and Canada were without power. Only six weeks later, two million customers of Pacific Gas

and Electric Company lost power in California.

What happened? As electric utilities serving the region geared up (and scaled down) to meet competition, routine maintenance, such as tree trimming around power lines, was reduced in the name of cost-cutting. Then a storm battered the West coast, trees fell on the power lines, and the lights went out.

These threats to public safety and to reliable electric service, along with pending threats to air quality, are examples of what the current movement toward competition and deregulation of the electric industry may mean. Today, electric companies are state-sanctioned monopolies. They have "exclusive service territories" — geographic areas in which other companies are not allowed to compete. The utilities generate the electricity, transmit the power from their plants to local switching stations, and distribute the power to homes and businesses. In exchange for government protection against competition, electric utilities are subject to state regulation over the reasonableness of their rates and the quality of their service.

In the past, utilities could prevent industrial and commercial businesses from obtaining inexpensive power from non-utility generators, because the utilities had monopoly control over the transmission lines. But federal regulations now require that utilities provide fair access to such lines for all generators, not merely the utility's own plants. So while utilities will retain a monopoly over local distribution, they will have to compete with non-utility generators to produce the cheapest electricity. This threatens the financial stability of many electric utilities, espe-

cially those with billions of dollars in stranded costs from expensive nuclear plants.

### THE FALL OF THE LAST GREAT MONOPOLY

The gain will be greater consumer choice, argues Central Illinois Lighting Company (CILCO) spokesperson Calvin Butler. Butler recently told a national gathering of consumer advocates in Chicago that "No one tells you where to shop for groceries. Why should they tell you where to shop for electricity?"

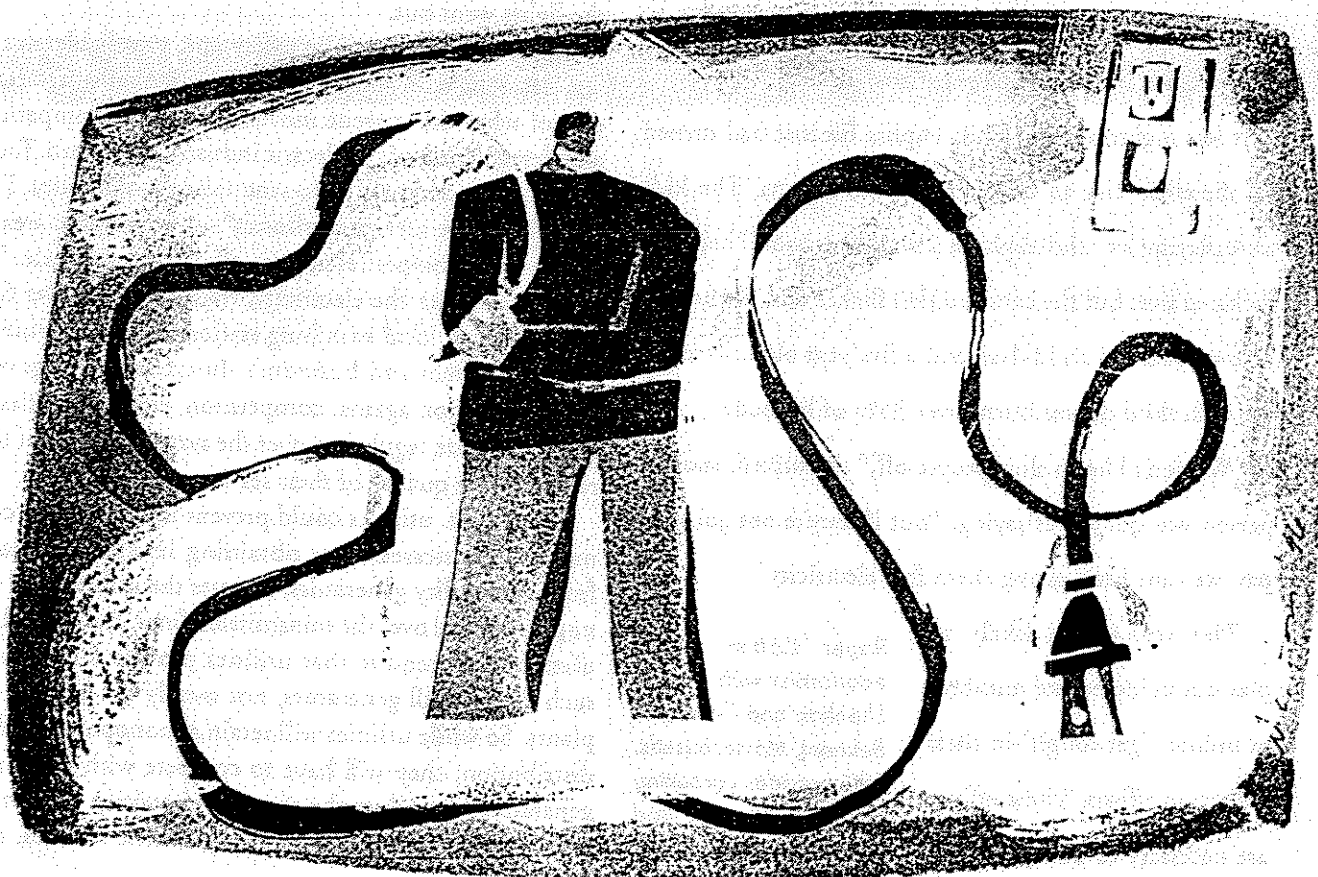
The power to choose will save money, according to CILCO. "In a state like Illinois — where [the vast majority] of residential electric consumers [are] supplied by investor-owned utilities [and] pay 20% to 25% more than the national average — the lack of consumer choice is costly to everybody." Other benefits, CILCO claims, will include better service as well as new and expanded services.

Nonsense, says University of St. Thomas (Minnesota) professor Steve Hoffman. The fuss is about the exercise of power, both political and economic. Today's threats to switch to competitive suppliers of electricity are simply the next generation of big industry's threats to move to new locations in order to get lower rates. Because alternative generators now have the legal right to transmit electricity over the local utility's lines, companies need not move their plants in order to switch suppliers.

The recent conflict between Raytheon, a major defense contractor, and Massachusetts Electric Company is one example of how corporations exercised power even under the old system. In response to threats by Raytheon to leave Massachusetts, the local electric company offered rate discounts of 20% and more for five years, with lower discounts being offered in subsequent years. Even then, Raytheon refused the discount in 1995, arguing that the deeper discount should last longer.

Ultimately, a discount was agreed to and approved in January 1996. Raytheon would say only that its deal with Mass. Electric would yield "significant savings" on its \$20-million-plus annual electric bill. The state Department of Public Utilities ordered that the precise terms of the discount be kept confidential. The secrecy was necessary, the Department said, because the rates were "competitively sensitive." Several dozen similar deals on both gas and electric rates for large industries had been approved at the time of the Raytheon agreement, with more pending.

In contrast to these actions toward big business, Hoffman says, electric industry competition will almost surely leave the small and less powerful in the dark. These consumers are simply not big enough and economically attractive enough to gain the interest of electric industry competitors. Instead of receiving the promised benefits





they will instead receive the harms of increased disconnections, reduced service quality, and higher rates.

For example, in Michigan, one of the states which has experimented with electric competition, during 1995 Consumers Power Company raised electricity rates for its 1.4 million residential users by 8.2% (\$42 on a typical annual bill), while lowering rates for the state's 9,000 industrial users by an average of 4.2%. Like Raytheon in Massachusetts, the largest and most powerful Michigan industrial consumers such as General Motors and Dow Corning got rate cuts of up to 20%.

Two developments have led to the push for deregulation of the electric industry. First, competition in the industry will help the big and powerful in society obtain lower energy bills. Many utilities have built more generating capacity than their customers now need, and often they rely heavily on outrageously expensive nuclear power plants. As a result, they have electric rates far higher than their potential competitors, often termed non-utility generators, or "NUGs." Such competitors can run new or existing power plants, usually fired by natural gas, at costs much lower than the average costs of a utility that is saddled with its historical mistakes.

These mistakes — excess capacity and nuclear plants — constitute as much as \$200 billion in "stranded costs." Large commercial and industrial users of electricity want to escape from paying for these costs through their electric rates, and have found two methods for doing so. One is bargaining with the utility to provide discounted rates, as in the Raytheon case. The

THE UTILITIES ARE  
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second is competition — having the freedom to buy their power from non-utility generators (or utilities in other states) who have lower costs. Second, technological changes in the generation of electricity, allowing relatively small plants to operate more cheaply, helped to provide large users with an alternative to the utilities. In the telecommunications industry, the advent of microwave and satellite transmission allowed companies to compete with then-monopoly supplier of telecommunications services AT&T. Similarly, technological improvements have allowed smaller companies to build and operate power plants, making it unnecessary to treat utilities as a "natural monopoly."

## WHO GAINS AND LOSES?

Natural monopolies. Exclusive service territories. Non-utility generators. Not seemingly the topics of typical breakfast conversations in most American households. But the outcome of the debate over who provides electricity to consumers — and how — will profoundly affect all consumers.

Large industrial customers will win, and win big. In a pilot project begun by CILCO in May 1996 to test consumer choice in electric purchases in three Illinois communities, industrial consumers received power at 2.50 cents per kilowatt hour (kWh). In contrast, CILCO's average industrial price is 3.76 cents, while neighboring Illinois Power's average is 4.52 cents, and Commonwealth Edison's (Chicago) average is 6.00 cents per kWh. Advocates of electric competition claim that such numbers will force existing electric companies to control their costs and reduce their existing rates, or risk losing customers to competitors.

Therein lies the rub, however. Alternative producers of less expensive power do not seek out small users (such as homeowners, renters and small businesses) as customers. When compared to large industrial consumers, the potential for profit is lower, and the administrative costs of marketing, billing and collection are higher, says Hoffman.

With typical residential bills for Mass. Electric Company at just over \$700 a year, for example, it would take nearly 30,000 customers having 30,000 meters read each month, resulting in 30,000 monthly bills and the accompanying credit and collection activity, to generate the same revenue as Raytheon's pre-discount bill of \$20+ million.

Small users will remain captive customers of the utility. In the meantime, utilities have reduced prices to the large users to forestall their switching to non-utility generators. Under these circumstances, the utilities are likely to make up the lost revenue by increasing prices to residential and small business customers.

The numbers are huge, according to Geoff Crandall, a principal in the energy consulting firm MSB Energy Associates of Middleton, Wisconsin. MSB has developed a mathematical model to estimate cost-shifting to residential customers due to electric industry restructuring. In Iowa alone, for example, MSB found that if stockholders are allowed to fully recover all costs, and if industrial customers "get a free ride," residential customers will see almost a 4% increase in their electric bills as a result of competition in the electric industry. While Iowa's situation is less severe than will be the case in other states, he says, the total residential losses for Iowa's three major utilities will nonetheless exceed \$410 million. According to Crandall, national figures are not available.

For these increased prices, consumers can expect to receive worse service, argues Pam Marshall, Executive Direc-

tor of the Energy Cents Coalition in Minnesota. Utility cost cuts are resulting in service reductions that fall disproportionately hard on small users, particularly the poor. Fewer customer service representatives, fewer offices where one can either make payments or talk with utility personnel, and less generous payment terms for repaying arrears — all are made in the name of cost cutting to meet competition.

Arguments over whether competition will “work” or not largely miss the point, Hoffman insists. The poor, the payment-troubled, and other customers who the electric industry considers less than desirable will suffer from a deregulated free market. Hoffman notes that experience in other deregulated competitive industries shows that the poor and hard-to-serve are disadvantaged by business actions taken to help meet competition. In 1982, for example, Congress largely deregulated the inter-city bus industry. Within ten years, the number of rural locations receiving regular route inter-city bus service had shrunk by more than 50%. A 1992 study by the U.S. General Accounting Office concluded that “the riders who have been losing service are those least able to afford and least likely to have access to alternative modes of transportation.” GAO concluded further that “most abandoned bus routes connected small, geographically isolated rural communities that were generally without passenger rail or air service.”

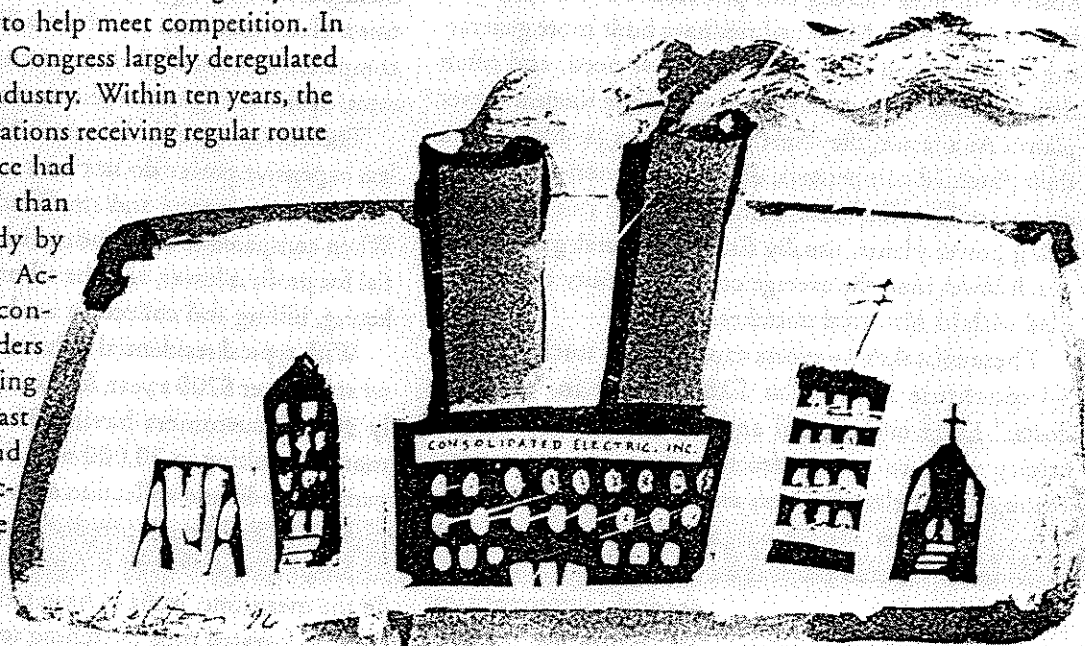
#### DOES COMPETITION BRING NIRVANA?

Even in industries that have never been regulated, competition often imposes higher prices and reduced services on those customers least able to protect themselves, including the poor. Competitive grocery stores in low-income urban neighborhoods, for example, charge prices up to 20% higher than in suburban areas because of claimed higher costs. Appliance and furniture prices in inner-city neighborhoods run 50% higher. Institutions financing mortgages for mobile homes charge far more in interest than for loans on more conventional housing, based on claimed higher default rates.

Competitive industries provide fewer services to poor people as well. One study in Los Angeles found 19 branch

banks in South Central Los Angeles, a predominantly poor black community having a population of 587,000 people. In contrast, the study found 21 branch banks in nearby Gardena, a middle class white community of only 49,800 persons. A separate study in Washington, DC found that residents in predominantly white neighborhoods have three times as many branches available, per person, as do residents of predominantly African American neighborhoods.

Similarly, consumer advocate Bobbi Bennett asserts that even if competition “works” in the electric industry, it will not address concerns that are important to society but yield no profits. These include the ability of low-income cus-



tomers to afford power, and protection of the environment. Such concerns, often termed “externalities,” are not of direct interest to businesses, since the businesses neither pay the cost nor receive the benefit of seeing the social goal achieved.

Some vital goods and services, such as electricity or water, should be available at affordable rates to all who seek them, regardless of ability to pay. But since the damage from a lack of universal service is imposed on society, not on the company, a competitive electric utility has little incentive to ensure affordable power. In addition to affordability a competitive market does not ensure that electric utilities will have fair procedures in the denial or termination of service.

Is there any way to make a deregulated electric industry palatable for small users? Some would say yes, if mechanisms are developed to combine small users into large

*Continued on page 41*

## UTILITY DEREGULATION SHOCK

*continued from page 19*

buying blocks that can bargain with power producers. Such aggregation methods might include allowing communities to bargain on behalf of everyone who lives within their boundaries. Large membership organizations such as the American Association of Retired Persons (AARP) and the American Automobile Association (AAA) have set a precedent for this by negotiating discounts on life and auto insurance for their members. Others say that small users simply cannot be aggregated into large enough blocks to convince competitive electric companies to pay sufficient attention to their needs.

### DIRTY AIR AND TOXIC NEIGHBORHOODS

Environmental damages are also externalities, so that a competitive firm will not voluntarily try to minimize them. Statutes or regulations can mandate the clean-up of pollution, since the regulated utility now has to pay for them. But a competitive, unregulated environment leads firms to more strongly resist cost increases, and to ignore environmental issues.

A report done for the National Association of Regulatory Utility Commissioners (NARUC) agrees, concluding that "industry restructuring will likely result in competitive pressures to increase the operation of currently underutilized coal facilities with relatively high air pollution emissions, and to extend the operation lives of these facilities."

### DEATH AND DESTRUCTION

Increasing the operation of old coal-fired power plants will directly lead to increased deaths. According to the ME3 report, "simply put, the more often a plant runs, the more pollution it will emit." ME3 then cites estimates that 64,000 people may die prematurely from heart and lung disease each year due to emissions of particulates.

Those deaths are likely to be concentrated among people of color and lower income groups. The political power of such customers is usually far less than that of large industries and more affluent residents. As a result, when electricity generators make facility siting decisions, they will search for low-income neighborhoods to locate their plants in.

Competitive electric utilities that achieve increased sales are likely to rely on old, inexpensive, highly polluting coal-fired power plants. As a result, the public, especially urban dwellers, will be stuck with damaging increases in air emissions as a result of utility sales to new markets.

A report by Minnesotans for an Energy Efficient Economy (ME3) finds that Minnesota's largest utility has four coal plants in the Minneapolis/St. Paul metro area that could increase their output. According to that report: "The plants have several common characteristics, the most important being that they are all aging, coal-burning generators operating in densely-populated areas." In addition, because old plants do not need to meet the pollution control standards of new plants, emissions from the metropolitan plants "are extraordinarily high compared to current standards governing new power plants," ME3 concludes.

Past reliance on improving energy efficiency, instead of building new plants, as a way to control this environmental damage is not likely to continue in a competitive electric industry. According to one industry analyst, Robert Smock of the publication *Electric Light & Power*, "survivors of ruthless competition will not be doing much to reduce electricity sales. They'll be doing their best to sell more of their product." The numbers bear this out. A survey of 50 utilities found that planners expected a 2% growth rate in energy efficiency programs between 1995 and 1998. This is far less than the 17% annual growth rate from 1990 to 1995.

Coke or Pepsi? MCI or AT&T? K-Mart or Walmart? Ford or Chevy? Consumer choice. Substantial bill savings. This is the mantra of competition advocates in the electric industry. But consumer advocates say the real choice is whether to protect the interests of the big and powerful, or those of the small and dispossessed. The electric industry should not be just another business, but rather an industry responsible for serving the public interest. The choice is whether to create an industry whose decisionmaking is governed only by the profit motive, or to maintain regulations that ensure universally affordable electricity and protection of the environment. ■

*Resources: Coal Plants in the Neighborhood: Stopping Increased Air Pollution from the NSP Merger, Kevin Bengston, Michael Noble and J. Drake Hamilton, Minnesotans for an Energy Efficient Economy (St. Paul, Minnesota) 1996; Competition in the Electric Industry: Assessing Impacts on Residential, Commercial and Low-Income Customers, Roger Colton, National Conference of State Legislatures (Denver, Colorado), 1996; Affected with the Public Interest: Electric Utility Restructuring in an Era of Competition, Jan Hamrin, National Association of Regulatory Utility Commissioners (Washington, DC) 1994; Can We Get There From Here? The Challenge of Restructuring the Electric Industry So That We Can All Benefit, John Stutz, et al, Utility Consumers Action Network (San Diego, California) 1994.*

# SUPPORTING MATERIAL

## A NATIONAL PERSPECTIVE ON THE ENVIRONMENTAL IMPACTS OF DEREGULATION

Presented by  
Donald W. Aitken, Ph.D., Senior Scientist  
The Union of Concerned Scientists

at

The Environmental Impacts of Electric Utility  
Deregulation Conference  
Madison, Wisconsin  
January 22, 1997

"WILL RETAIL COMPETITION CAUSE AN INCREASE IN THE EMISSION OF CERTAIN POLLUTANTS AND, IF SO, HOW DO WE PROTECT THE ENVIRONMENT WHILE ALLOWING COMPETITION TO FLOURISH?"

Speech of January 9, 1997, by Senator Dale Bumpers, as he prepares to introduce his own legislation to promote electric utility restructuring.

IMPACTS OF DEREGULATION  
ON NATIONAL ENERGY AND THE ENVIRONMENT  
SUBBOILING POINT

October 1994, p. 11

As the Commission on Competition and the Energy Industry

**RETAIL WHEELING IS NOT IN THE BEST INTEREST OF STAKEHOLDERS, STATE ENERGY POLICY, THE ECONOMY OF CONNECTICUT, OR THE PUBLIC.**

**RETAIL WHEELING SHOULD ONLY BE INTRODUCED AT A TIME OF CAPACITY NEED AND THEN AFTER A CAREFUL STRUCTURING TO MINIMIZE ADVERSE EFFECTS.**

Connecticut Department of Public Utility Control (DPUC)  
September, 1994

to the extent that who else contribute

To the extent that wholesale competition results in the production of power for export from the adjacent state into the restructuring state, negative environmental impacts are likely. Increased air emissions in the adjacent state would be inevitable.

Transport of pollution could occur across state lines to other non restructuring states...In addition, if enough transactions occurred to necessitate new generation or transmission facilities, they would create siting and other environmental impacts.

*The Unintended Impacts of Restructuring*  
National Council on Competition and the Electric Industry  
October, 1996, p. 11.